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8.

A Case of Cystic Interstitial Uterine Fibroid Appearing Papillomatous.

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An instructive monograph on cystic tumours of the uterus, by Salva Mercadé, appeared last year in a French medical serial.* He divided them into (1) mucous or follicular cysts, (2) hydatid cysts, (3) embryonic cysts, always associated with the name of Von Recklinghausen, (4) blood-cysts, including cavernous angioma, and also cysts of the other three classes into which hæmorrhage has taken place. Huguier's serous cysts were probably embryonic.

I will relate an instance in my own practice where a uterus bore a solitary cystic tumour which cannot be referred to any of the above sub-divisions. This cyst was formed by the liquefaction of the connective-tissue in an interstitial fibro-myoma, the essential muscular tissue assuming the appearances of a papillomatous growth.

Mrs. R. R., a Russian Jewess, aged 45, was referred to me on July 1st, 1908, by Dr. A. Gaster on account of a uterine tumour which had increased in size during the past two or three months, under his observation. She was 45 years of age, and had been married for sixteen years. She had borne six children, and the youngest was three years old. The puerperia, it seemed, were all normal. In 1902 the patient suffered from rheumatic fever, followed by menorrhagia, from which she was never free during the succeeding six years. The catamenia were perfectly regular before the illness, appearing every four weeks with moderate show of blood; after the illness the interval varied from three to five weeks and the patient was troubled with hæmorrhages. For two days before I first saw her she had been obliged to keep to her bed.

The patient was very corpulent, pale, and rather sallow. A tense, spherical and freely movable tumour occupied the hypogastrium, extending upwards nearly to the umbilicus. The cervix uteri was continuous with the tumour and the vaginal fornices were free.

The urine was rather scanty, very acid and turbid, clearing entirely on boiling; it was free from sugar or albumen. The tongue was moist, pale and rather rough, the appetite good, but the bowels were very constipated. The pulse was 72, small in volume and quite regular. There was a systolic murmur at the apex, conducted to the axilla.

* "Les kystes de l'utérus." *Revue de Gynéc. et de Chirur. Abdom.*, vol. xi. p. 217.

The curette had been applied three months previously, but the menorrhagia continued.

I kept the patient at rest for a week, and operated on July 8th, assisted by Dr. Clifford White, Dr. Belfrage administering the anæsthetic; the tumour had sunk considerably downwards since I first examined it, half of its bulk occupying the pelvis. The abdominal walls were very thick with fat. The uterus, which seemed uniformly enlarged, was amputated above the cervix, both appendages being removed as well.

As I cut through the uterus, about four ounces of clear serum escaped. At first I thought that I had laid open a gravid uterus, as some solid growth, like fœtal membranes, floated in the serum. On further inspection I found that the solid growth had all the appearances of a papilloma such as develops along the line of Gartner's duct, very pale pink in colour. It sprang from the inner wall of a cyst which lay entirely in the substance of the posterior wall of the uterus and constituted the tumour. The cyst projected into the uterine cavity, which in consequence was much dilated, but showed no visible signs of endometritis, the mucous membrane being very smooth and pale, nor did I find any pent-up discharge or coagula.

The tissues on the cut surface of the uterine stump were free from new growths. I trimmed the stump lest any of the cyst wall might be left behind. The stump was treated in the usual manner, an anterior peritoneal flap being sewn over its raw surface.

I saw the patient on November 17th. There had been no period since the operation; in August she was troubled with frequent flushings, which had subsided but occasionally woke her up at night. The abdominal wound had cicatrized well; the stump of the cervix had become smaller, and was quite movable. The patient was troubled with muscular rheumatism during the close weather in October, but declared that she was entirely free from pain or discomfort in the pelvic region or abdomen.

Description of the Specimen. I cut away a piece of the intra-cystic growth and sent it to Dr. G. L. Eastes' Laboratories of Pathology and Public Health, where sections were prepared for me. The uterus was sent to the Museum of the Royal College of Surgeons.

I must observe that the parts removed shrank considerably before I was able to examine them at the conclusion of the operation, much serum running away out of the cyst. Already, as above related, four ounces escaped when the knife passed through the uterus. The preservative media and the freer opening of the cyst to expose its contents have caused further shrinkage. Hence it is impossible for me to record accurate measurements. The cyst cavity before it was laid open was about three times as capacious as it is in the mounted specimen, which will now be described.

Naked-eye Appearances. The specimen consisted of the body of the uterus and the appendages. The right Fallopian tube and ovary were normal. The left tube was obstructed at its orifice and slightly dilated; the ovary contained a blood-cyst which had ruptured during extraction.

The body of the uterus was laid open anteriorly. The muscular wall was greatly hypertrophied; it measured half an inch in thickness at the fundus and over three-quarters of an inch midway between the fundus and the cervix. The cut surface showed no interstitial growths, nor was there any trace of a myoma beyond the limits of the cystic tumour. The endometrium appeared quite healthy. The cyst, laid open like the uterus by a vertical incision anteriorly projected into and dilated the uterine cavity. It measured over three inches in its widest diameter. The cut edge of the cyst-wall, representing the tract of uterine wall between the cavity of the cyst and the uterine cavity, was about a quarter of an inch thick, but the tract of uterine tissue between the cavity of the cyst and the posterior surface of the uterus showed extreme hypertrophy, measuring about two inches at its thickest part. The cavity of the cyst appeared stuffed with exuberant papillomatous or villous masses pale pink in colour, which floated in the fluid contents before the cyst was opened. The true nature of these solid masses was revealed by the microscope.

Microscopic Appearances. The section of the intra-cystic growth prepared at the Laboratories of Pathology was carefully examined by Dr. Cuthbert Lockyer, Dr. Clifford White, Registrar to the Samaritan Hospital, and myself, and we failed to detect any malignant elements or anything more than a collection of fibro-muscular and connective-tissue.

I again examined the section at the College of Surgeons and submitted it to Mr. Shattock. According to that authority the growth was seen on section to consist of firm fibro-myomatous tissue with tracts of connective-tissue undergoing liquefaction without evidence of myxomatous changes. There were several blood-vessels, the arteries had well-developed muscular coats, as usual in fibroids, but there were no dilated lymph spaces, no trace of uterine glands, no epithelial structures of any kind and no sarcoma-tissue. On examining different parts of the section it was found that the softening of the connective-tissue had left the bundles of fibro-myomatous tissue isolated, so that they stood out in relief. In parts this liquefactive process had extended into the bundles, isolating the individual muscle-cells.

Thus the cyst cavity represented the most advanced stage of the general liquefaction of the connective-tissue revealed by the microscope, whilst the solid portion, which simulated a papillomatous or villous mass, was simply the purely fibro-myomatous portion of the growth deprived of its connective-tissue. As there was no

myxomatous degeneration of the connective-tissue the fluid contents of the cyst were not thick and tenacious, but perfectly fluid.

The tumour was in fact a solitary interstitial fibroid which had become cystic by liquefaction of its connective-tissue.

Remarks.

This cyst was associated with a fibro-myoma, and Mercadé, to whom I have referred, excludes from his groups all cystic tumours secondary to solid uterine growths. It differed, on the other hand, greatly from the commoner and well-known types of cystic fibroid and other mixed growths. For that reason it will be advisable to dwell for awhile on its negative characters. I shall then explain that I have only found one case recorded of a uterine cyst where the positive characters were in any way similar to those given in the above description of my own specimen, and in that case the cyst was not solitary, as in mine, but associated with several fibroid growths.

It is clear that the cyst which I removed was not a chorio-epithelioma, nor a carcinoma of any type. It was not an instance of Von Recklinghausen's cystadenoma originating in Wolffian relics. It was not an adenoma. Cullen (*Adenomyoma of the Uterus*, p. 176) writes: "Given a myomatous uterus containing large cystic areas with smooth velvety linings and chocolate-coloured contents, adeno-myoma will usually be found," but in this tumour there was one big solitary cyst; its lining was not smooth and velvety, and it contained a clear, not a chocolate-coloured fluid. The microscope revealed no glandular structures. Cullen, however, as will be explained, has come across a new growth not unlike that under consideration.

Again, lymphangioma may be set aside. It is, in my experience, the commonest variety of "cystic fibroid." The dilated lymphatics form spaces which vary from microscopic proportions to big cavities holding many pints of clear pale yellow coagulable fluid. The lining membrane is smooth, being endothelium; the myomatous tissues lies outside, not inside, the cyst.

Then it must be added that the tumour was not a true papilloma of any type. It did not lie in the line of Gartner's duct, and Coblenz found that "parauterine cystoma," developed from the duct, was very rarely papillomatous ("Zur Genese und Entwickelung von Kystomen in Bereich der inneren Sexualorgane," *Virchow's Archiv*, Vol. lxxxiv, 1881). Amand Routh ("On Cases of Associated Parovarian and Vaginal Cyst formed from a Distended Gartner's Duct," *Trans. Obstet. Soc.*, Vol. xxxiv, p. 152) brings forward several cases where it seemed quite reasonable to suppose that in each instance the lower cyst was of Gartnerian origin, but it was vaginal, not uterine, and it did not bear papillomatous growths.

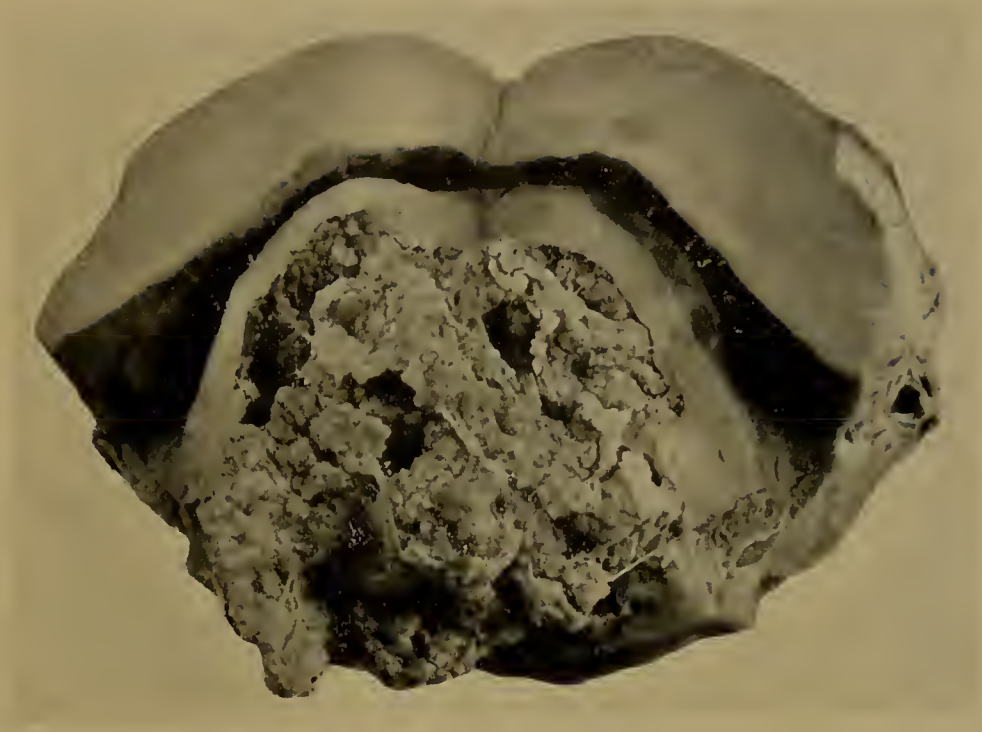

Fig. 1.

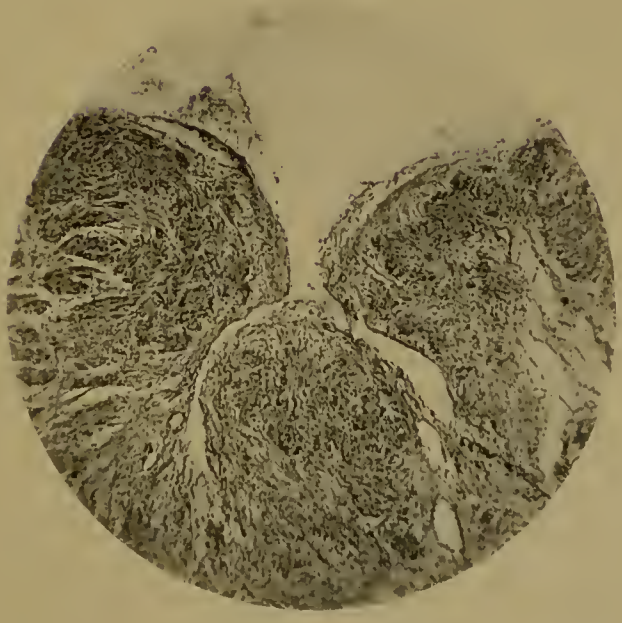

Fig. 2.

This tumour was cystic, so the question, which the microscope alone could solve, was, what kind of cyst might it be? We have seen that it did not represent a lymph-angioma; it was not multiple but quite solitary, and it bore growths instead of being smooth-walled. I must dwell, however, on a case related by Manoury of Chartres ("Kyste volumineux inclus dans la paroi utérine: Hystérectomie abdominale," *Bulletins de la Soc. Anat. de Paris,* 1894, p. 440). He operated on a girl aged eighteen, subject to menorrhagia for six months. The uterus reached as high as the umbilicus. As he amputated the body of the uterus above the cervix he was surprised, just as I was when I operated, by a rush of limpid fluid from a cavity laid open by the knife. As in my case, the new growth formed a cystic cavity in the posterior wall of the uterus, and bore solid contents. But the solid growth was found by Pilliet to be an interstitial sarcoma of the uterus, and the fluid came from minute cavities distributed over the entire area of the tumour substance. I presume that many would consider that the new growth was a cystic lympho-sarcoma, but Pilliet's opinion must be respected, and the lymph spaces might have represented secondary changes. The main feature of resemblance to my case was the unexpected opening of the cyst during a hysterectomy.

A more recent case reported by Herrenschmidt ("Sarcome kystique de l'Uterus," *Annales de Gynéc. et d'Obstét.,* July, 1908, p. 427) is otherwise suggestive. The patient was fifty-two years old and subject to painless enlargement of the abdomen for three years. Ovarian cyst was diagnosed, and there was a history of rupture with temporary relief. Just before the operation rupture occurred again. A big pouch, bearing a laceration, was found implanted on the fundus; its walls were very thick, and contained a chocolate-coloured fluid holding grumous masses; much had escaped into the peritoneal cavity. The rest of the uterus was of normal size and bore one solitary interstitial fibroid smaller than a nut. The pathological characters of the tumour, removed by hysterectomy, are minutely described by Herrenschmidt. The cyst-wall was lined with densely-packed, frayed, cut tissue, and at the line of union of the cyst-wall and the fundus the normal muscular tissue of the uterine wall was succeeded by œdematous fibro-muscular tissue, the fibres bearing more and more numerous round nuclei; further on interstitial hæmorrhages were detected, and then true sarcoma-tissue with irregular cells. Lastly, towards the cavity this sarcoma tissue, very vascular, was seen to be breaking down. So in my own case did a cyst form from the breaking down of degenerate tissue, but there was no evidence of sarcomatous degeneration amongst the muscle-cells.

Herrenschmidt notes that in three out of five recently-reported cases of cystic sarcoma of the uterus, as revealed by operation and

the microscope, the *diagnostic clinique*, as he politely calls it, was ovarian cyst.

The cyst in my case was fibro-myomatous tissue without glandular elements or lymphangiectases, and with no evidence of sarcoma or carcinoma. In another which I reported in 1893 ("Large Cystic Myoma of the Uterus," *Medico-chir. Trans.*, Vol. lxxvi, p. 325), the cyst was in all probability developed from a lymph space, the myomatous tissue around it was spongy and full of cavities which gave it a bullous appearance on section. This is a characteristic appearance in lymphangioma. But I found solid masses growing from the inner surface of the big cyst which formed the main part of the tumour. I suspected that they might be degenerate myoma tissue; they appeared as pedunculated bodies two or three inches long and apparently fibrinous. They proved to be really fibrinous, and represented changes in old coagula, such as are seen in hydroceles and bursal sacs. I failed to trace in their midst one single muscle-cell.

Turning back to Cullen (*loc. cit.*), I at length find a description of a tumour which bore many points of resemblance to my own. A myomatous uterus contained "a central cavity filled with chocolate-coloured contents. This myoma (*sic*) had undergone a good deal of hyaline degeneration. In the centre was a cystic area and into this hæmorrhage had taken place. It was not an adenomyoma." Cullen adds a drawing, with the note that "the walls of the cavity were composed of myomatous tissue that had undergone partial hyaline degeneration, and the cavity was totally devoid of any epithelial lining. There had evidently been simple cystic formation as a result of the breaking down of hyaline tissue. Hæmorrhage had taken place later."

Thus, after considerable searching, I have succeeded in finding a record of a uterine cyst produced, as in my own case, by degenerative changes in an interstitial myoma, though as far as can be judged from the above description of its histology, the degeneration was not homologous to that which was detected in my specimen.

Description of the Drawings.

Fig. 1. The uterus laid open anteriorly so as to display the cyst which bulges into the uterine cavity. The cyst has been opened to expose its contents, degenerating fibro-myomatous tissue simulating a papillomatous or glandular mass.

Fig. 2. Microscopic section of one of the pseudo-papillomatous growths in the cyst, showing its free edge towards the cavity of the cyst. No histological elements can be seen excepting fibro-myomatous and connective tissue.